

**AMENDMENT NO. 3 NOVEMBER 2020**  
**TO**  
**IS 7538 : 1996 THREE-PHASE SQUIRREL CAGE INDUCTION MOTORS**  
**FOR CENTRIFUGAL PUMPS FOR AGRICULTURAL APPLICATION —**  
**SPECIFICATION**

*(First Revision)*

(Second Cover page, *Foreword*, para 3) — Substitute ‘IS 15999 (Part 1)’ for ‘IS 325 1996’, wherever applicable.

(Second Cover page, *Foreword*, para 4) — Delete ‘1992’.

(Page 1, clause 4.1, line 3) — Substitute ‘6 and 7 of IS 15999 (Part 1)’ for ‘4 of IS 325 : 1996’.

(Page 1, clause 4.3, line 3) — Substitute ‘Table 7 of IS 15999 (Part 1)’ for ‘Table 1 of IS 12802 ; 1989’.

(Page 1, clause 5, line 5) — Substitute ‘IS/ IEC 60034 (Part 5)’ for ‘IS 4691 : 1985’.

(Page 2, clause 9.1.1, line 2 & 5) — Delete ‘1974’.

(Page 2, clause 10) — Substitute the following for the existing:

‘This standard is applicable to motors of continuous duty as specified in IS 15999 (Part 1).’

(Page 2, clause 11, line 2) — Substitute ‘IS 3043’ for ‘IS 3043 1987’.

(Page 2, clause 12.3, line 5) — Delete ‘other than efficiencies’.

(Page 2, clause 12.3, line 8) — Substitute ‘Table 20 of IS 15999 (Part 1)’ for ‘Table 1 of IS 325 1996’

(Page 2, clause 14) — Substitute the following for the existing:

‘The limits of permissible temperatures and temperature-rise above the cooling medium temperature for motors having insulation of Classes B and F (see IS 1271) shall be in accordance with Table 7 of IS 15999 (Part 1).’

(Page 3, 4 and 5, Table 1 to Table 6) — Substitute ‘IS/IEC 60034 (Part 5)’ for ‘IS 4691 : 1985’.

(Page 6, clause 17.2.1, line 4) — Delete ‘1992’.

(Page 6, clause 18, line 3) — Substitute ‘Table 22 of IS 15999 (Part 1)’ for ‘Table 1 of IS 325 : 1996’

(Page 6, clause 19.1, line 2) — Delete ‘1974’.

(Page 6, clause 19.1.1) — Substitute the following for the existing:

‘19.1.1 Terminal marking and direction of rotation of shaft shall be in accordance with IS/IEC 60034 (Part 8).’

(Page 6, clause 22.1) — Substitute the following for the existing:

‘22.1 The tests specified in 22.3 shall normally be carried out at manufacture’s works test methods given in IS 4029 shall be followed.’

(Page 6, clause 22.2.1) — Substitute the following for the existing:

‘22.2.1 The requirements specified in 17 of IS 12615 shall apply.’

(Page 7, clause 23.1.1, line 4) — Substitute ‘IS 15999 (Part 1)’ for ‘IS 12802 : 1989’.

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(Page 7, clause 23.1.2, line 3) — Substitute ‘Table 7 of IS 15999 (Part 1)’ for ‘Table 1 of IS 12802 : 1989’.

(Page 7, clause 24.3, line 2) — Delete ‘1967’.

(Page 7, clause 25) — Substitute the following for the existing:

‘The requirements and values of voltage for high voltage test shall be in accordance with 6 of IS 4029.’

(Page 7, clause 26, line 2) — Substitute ‘30 megaohm’ for ‘one megaohm’.

(Page 7, clause 26, NOTE) — Delete ‘1992’.

(Page 8, Annex A) — Substitute the following for the existing:

## ANNEX A

(Clause 2)

### LIST OF REFERRED INDIAN STANDARDS

IS No.	Title	IS No.	Title
900 : 2019	Code of practice for installation and maintenance of induction motors ( <i>third revision</i> )	12065 : 1987	Permissible limits of noise level for rotating electrical machines
1231 : 2019	Dimensions and output Series of Foot-mounted induction motors — Fram Numbers 56 to 351L ( <i>fourth revision</i> )	12075 : 2008	Mechanical vibration of rotating electrical machines with shaft heights 56 mm and higher — Measurement, evaluation and limits of vibration severity ( <i>first revision</i> )
1271 : 2012	Electrical Insulation-thermal Evaluation and Designation ( <i>second revision</i> )	12360 : 1988	Voltage bands for electrical installations including preferred voltages and frequency
1885 (Part 35) : 1993	Electrotechnical vocabulary : Part 35 Rotating machines ( <i>first revision</i> )	IS 12615 : 2018	Line operated three phase a.c Motors (IE Code) — Efficiency clauses and performance specification ( <i>third revision</i> )
2223 : 1983	Dimensions of flange mounted ac induction motors ( <i>second revision</i> )	15999 (Part 1) : 2016	Rotating electrical machines: Part 1 rating and performance ( <i>first revision</i> )’
2254 : 1985	Dimensions of vertical shaft motors for pumps ( <i>first revision</i> )	60034 (Part 5) : 2000	Rotating electrical machines: Part 5 Degrees of protection provided by the integral design of rotating electrical machines (IP CODE) — Classification ( <i>second revision</i> )
4029 : 2010	Guide for testing three-phase induction motors		
6362 : 1995	Designation of methods of cooling of rotating electrical machines ( <i>first revision</i> )	60034 (Part 8) : 2014	Rotating electrical machines: Part 8 Terminal markings and direction of rotation ( <i>third revision</i> )